

FY09 NextGen Portfolio



**Federal Aviation
Administration**

Integration, Development and Operations Analysis Capability

Date: November 2008

Overview

- **Project Capability**
- **Project Smart Sheet**
 - Project Description
 - Problem/Performance Gap/Mission Shortfall Description
 - Project Objectives/Description of Solution
 - Support to Goals
 - Flight Plan
 - NextGen Implementation Plan
 - Interdependencies
 - Capabilities/OIs, EA Decision Points
 - Projects/Demonstrations/Programs
- **Project Schedule – include deliverables and links to EA & Goals**
- **Project Risk Identification and Mitigation Strategy**
- **Project Details**
- **Supporting Activities – Policy, International efforts, Working Groups, etc.**
- **Key Personnel**

Transform Facilities
Solution Set



Project Capability

- The ability to integrate, develop, and analyze NextGen concepts currently does not exist.
- This project provides a real-time, flexible, scalable, and component/object oriented simulation environment where concepts, technologies, and systems can be developed, tested, and validated.

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Project Smart Sheet

<ul style="list-style-type: none">• Project Description <p>This project provides a real-time, flexible, scalable, and component/object oriented simulation environment where concepts, technologies, and systems can be developed, tested, and validated</p>	
<ul style="list-style-type: none">• Problem/Performance Gaps <p>The ability to integrate, develop, and analyze NextGen concepts currently does not exist</p> <p>As NextGen grows, an ongoing requirement for this will continue to exist</p>	<ul style="list-style-type: none">• Solution <p>Develop real-time, flexible, scalable, and component/object oriented rapid prototyping and simulation environment. Tech Center will develop a NextGen Integration & Evaluation Capability (NIEC).</p>
<ul style="list-style-type: none">• Support to Goals <ul style="list-style-type: none">– Flight Plan– NextGen Implementation Plan <p>Increase Capacity</p> <p>Increase Safety</p>	<ul style="list-style-type: none">• Interdependencies <ul style="list-style-type: none">– Capabilities/OIs, EA Decision Points– Projects/Demonstrations/Programs <p>N/A</p>

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Project Schedule (FY 09)

Description	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Develop NIEC (Phase 1) - Interim Capability is established															
Develop NIEC (Phase 2 – Formal Capability is operational)															

Project Schedule (FY 10)

Description	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
Develop NIEC (Phase 3) – Continued Enhancements															

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Project Details - NIEC Overview

- Real-time, flexible, object-oriented, rapid prototyping and simulation environment that simulates the EA infrastructure
 - Java and C++ based interfaces
 - Leverages **D**istributed **E**nvironment for **S**imulation, **R**apid **E**ngineering and **E**xperimentation (DESIREE)
- Supports low to medium fidelity simulations (part & full task)
- Evolves over time - integrate capabilities as needed.
- Emphasis on mid-term NextGen (2012 – 2018)
- Part of the “Transform Facilities Solution Set” objective to create a NextGen “operational analysis capability”.
- Not a new lab...refurbishment of old Free Flight Lab
 - Collocate and integrate capabilities into a single location
- Supports concept exploration & development...

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Project Details

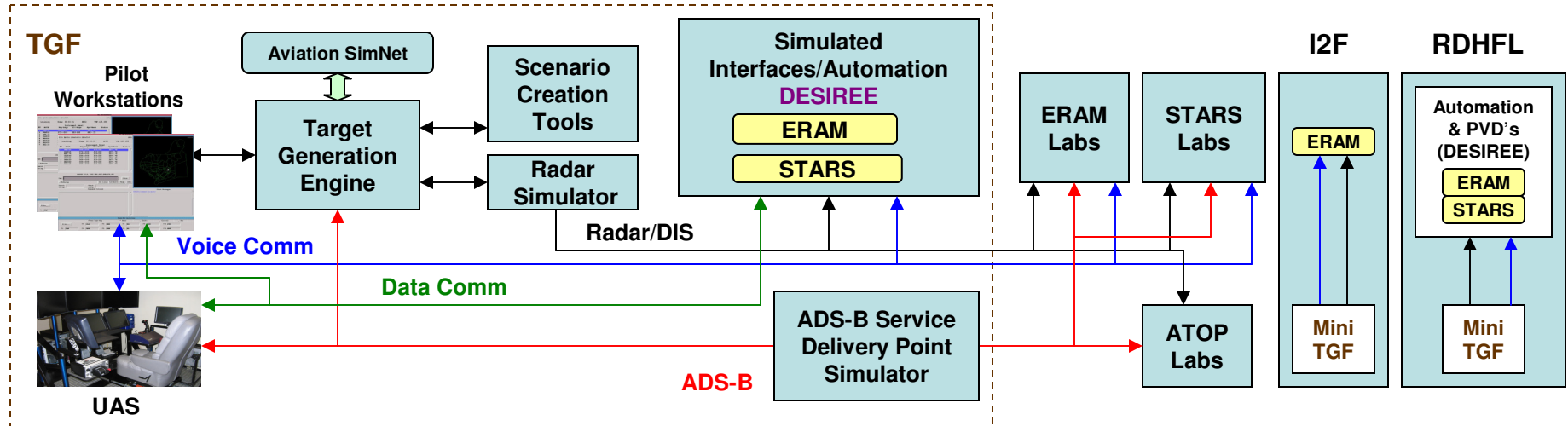
- Phased Development Approach for NIEC
 1. **Apr 2009** - Interim Capability for UAS Project
 2. **Nov 2009** - Complete initial Collocation/Integration
 3. **Nov 2010** - Enhancements

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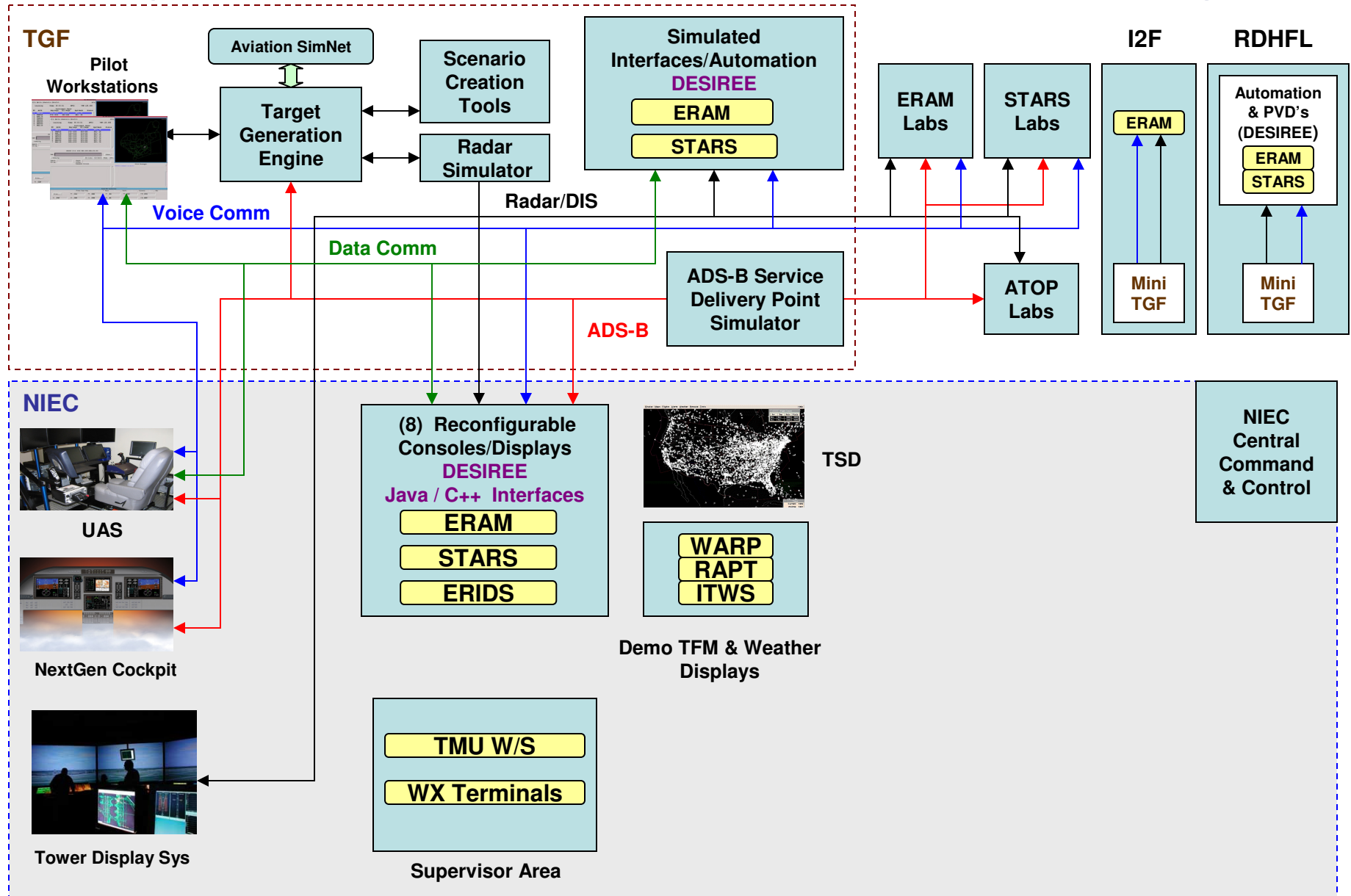
Project Details

Phase 1- Interim Capability



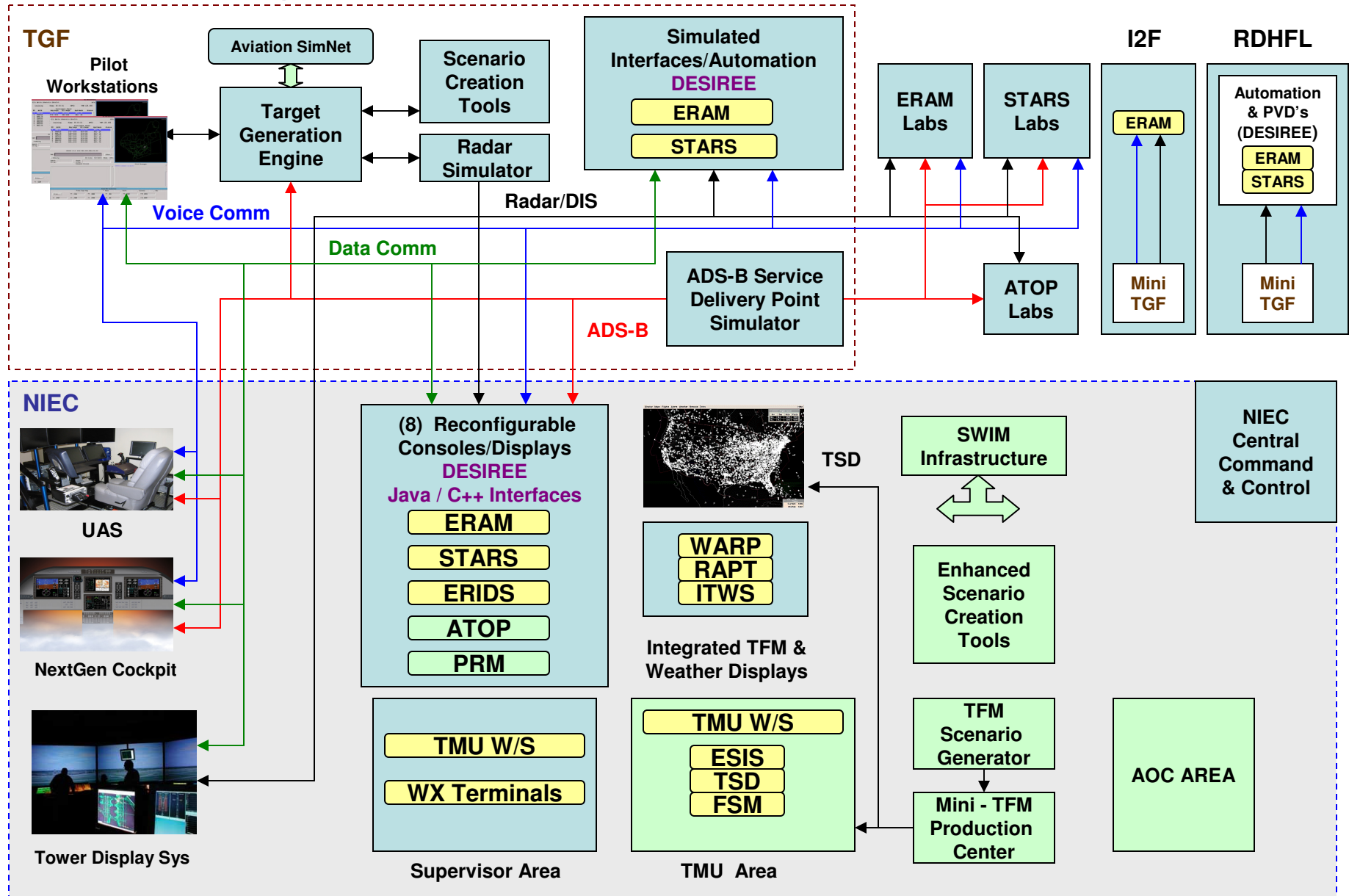
Project Details

Phase 2 – Initial Collocation/Integration



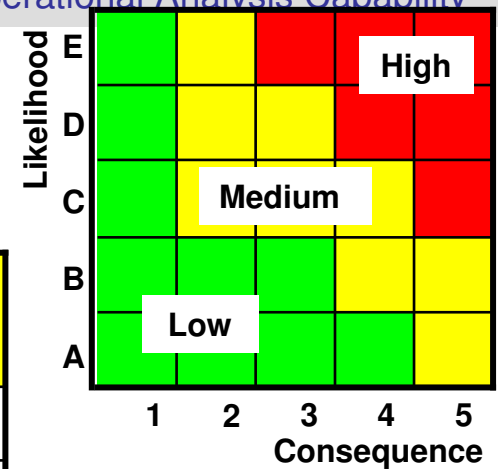
Project Details

Phase 3 – Enhancements



Project Risks

Integration, Development and Operational Analysis Capability



Risk Level (T,S,C)	Description	Impacts	Mitigation Strategy
S- B2	none		

T, S, C: Technical, Schedule, or Cost

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Resources

- **FAA Personnel**
 - Technical Center Laboratory Services Group
 - Layout, design, integration, and development
 - Lab operations, maintenance, and technical development services
 - NextGen Integration and Implementation Office
 - Program planning, funding, customer/sponsor coordination, lab requirements and research priorities
 - Research and Technology Development Office
 - Study preparation, experimental design, conduct/analysis services
 - Requirements Input
- **Other Government Personnel**
 - None at this time
- **Contract Personnel**
 - Technical Center has Support Services Contracts in place
- **Challenges**
 - Need to maintain steady dialogue with system engineers to ensure NIEC meets evolving needs

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Acquisition Status/Requirements

- **Existing Contracts**
 - L3 Titan, CO – Cynthia Hische
 - General Dynamics, CO - Cynthia Hische

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FY '09 NextGen Implementation Plan Commitments

(PLA Milestones)

- **This is a support capability for other NextGen Initiatives.**

NextGen... Integrating Ideas, Systems and Solutions

